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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/615,430	07/13/2000	Luc Wuidart	S1022/8393	3359

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EXAMINER

LY, NGHI H

ART UNIT PAPER NUMBER

2686

DATE MAILED: 06/09/2004

*14*

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/615,430

Applicant(s)

WUIDART ET AL.

Examiner

Nghi H. Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-20 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>15</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 2, 4, 7-13, 17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being obvious over the Applicant's admitted prior art in view of Burdick et al (US 6,424,820).

Regarding claims 1, 9, 10, 12 and 13, the admitted prior art teaches an electromagnetic transponder including a parallel oscillating circuit (see Applicant's admitted prior art fig.1) adapted to being excited by a series oscillating circuit of a

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read/write terminal when the electromagnetic transponder enters the field of the read/write terminal (see Applicant's Background Of The Invention page 1 lines 18-21).

The Applicant's admitted prior art does not specifically disclose the components of the parallel oscillating circuit of the transponder are sized based on a predetermined distance so that a coupling coefficient between respective oscillating circuits of the read/write terminal and of the electromagnetic transponder rapidly decreases when a distance separating the electromagnetic transponder from the read/write terminal becomes greater than a predetermined distance.

Burdick teaches the components of the parallel oscillating circuit of the transponder are sized based (see column 39, line 14 to column 40, line 44) on a predetermined distance so that a coupling coefficient between respective oscillating circuits of the read/write terminal and of the electromagnetic transponder rapidly decreases when a distance separating the electromagnetic transponder from the read/write terminal becomes greater than a predetermined distance (see Burdick, column 6 lines 12-21, in Burdick, "1-3 meters" reads on Applicant's predetermined value).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Burdick into the system of the Applicant's admitted prior art so that user can be accommodated in a small physical area without interference (see Burdick, column 6 lines 14-15).

Regarding claim 2, the combination of Burdick and the Applicant's admitted prior art teaches predetermined distance corresponds to 1-3 meters (see Burdick, column 6

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lines 15-21). The combination of Burdick and the Applicant's admitted prior art does not specifically disclose the predetermined distance corresponds to 1 centimeter. However, such distance range would have been obvious since the particular distance range could have been determined by the inventors' needs e.g., use a distance range which can minimize the interference with other users.

Regarding claim 4, the combination of Burdick and the Applicant's admitted prior art teaches the electromagnetic transponder includes an inductance and a capacitance of the parallel oscillating circuit. The combination of Burdick and the Applicant's admitted prior art does not specifically disclose the inductance of the parallel oscillating circuit is maximized, a capacitance of this oscillating circuit being minimized. However, such the inductance is maximized or the capacitance is minimized would have been obvious since the inductance is maximized or the capacitance is minimized could have been determined by the inventors' needs e.g., use an inductance or capacitance which can minimize the interference with other users.

Regarding claims 7 and 11, the combination of the Applicant's admitted prior art and Burdick teaches the number of turns of an inductance of the parallel oscillating circuit of the transponder is 25 (see Burdick column 40 line 52). The Applicant's admitted prior art and Burdick does not specifically disclose a number of turns of an inductance of the parallel oscillating circuit of the transponder is in a range of between 5-15. However, such number of turns would have been obvious since the particular number of turns could have been determined by the inventors' needs e.g., use a

number of turns which can optimize the transmission coverage area that also minimizes interference.

Regarding claim 8, the combination of the Applicant's admitted prior art and Burdick teaches the respective value of a capacitance and of an inductance of the parallel oscillating circuit are 39 pF and 6.48 microHenries (see Burdick column 40 lines 58-61). The Applicant's admitted prior art and Burdick does not specifically disclose the values of a capacitance and of an inductance range between 5 and 100 pf and between 2 and 25 microHenries. However, such particular value of capacitance and inductance would have been obvious since the particular value of capacitance and inductance could have been determined by the inventors' needs e.g., use particular value of capacitance and inductance which can optimize the transmission coverage area that also minimizes interference.

Regarding claim 17, the Applicant's admitted prior art teaches a system for data transfer comprising: a terminal including a series oscillating circuit having a first inductive element (see fig.1, L1) and a first capacitive element (see fig.1, C1), and a transponder including a parallel oscillating circuit having a second inductive element (see fig.1, L2) and a second capacitive element (see fig.1 C2 and see Applicant's Background of The Invention page 2 lines 4-11).

The Applicant's admitted prior does not specifically disclose the first and second inductive elements and first and second capacitive elements are sized based on a predetermined distance such that a coupling coefficient between the series oscillating

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circuit and the parallel oscillating circuit decreases rapidly when a distance between the terminal and the transponder is less than a predetermined value.

Burdick teaches inductive elements and capacitive elements are sized (see column 39, line 14 to column 40, line 44) based on a predetermined distance such that a coupling coefficient between oscillating circuit decreases rapidly when a distance between the terminal and the transponder is less than a predetermined value (see Burdick, column 6 lines 12-21, in Burdick, "1-3 meters" reads on Applicant's predetermined value and the signal strength will fall off in any distance less than 1 meter or greater than 3 meter).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Burdick into the system of the Applicant's admitted prior art so that user can be accommodated in a small physical area without interference (see Burdick, column 6 lines 14-15).

Regarding claim 19, the combination of Burdick and the Applicant's admitted prior art teaches predetermined value corresponds to 1-3 meters (see Burdick, column 6 lines 15-21). The combination of Burdick and the Applicant's admitted prior art does not specifically disclose the predetermined value corresponds to approximately 1 centimeter. However, such distance range would have been obvious since the particular distance range could have been determined by the inventors' needs e.g., use a distance range which can minimize the interference with other users.

Regarding claim 20, the combination of the Applicant's admitted prior art and Burdick teaches the number of turns of an inductance of the parallel oscillating circuit of

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the transponder is 25 (see Burdick column 40 line 52). The Applicant's admitted prior art and Burdick does not specifically disclose the first inductive element comprises a single turn. However, such single turn would have been obvious since the particular number of turns could have been determined by the inventors' needs e.g., use a number of turns which can optimize the transmission coverage area that also minimizes interference.

4. Claims 3 and 18 are rejected under 35 U.S.C. 103(a) as being obvious over the Applicant's admitted prior art in view of Burdick et al (US 6,424,820) and further in view of DeMichele (US 5,084,699).

Regarding claims 3 and 18, the combination of the Applicant's admitted prior art and Burdick teaches the electromagnetic transponder of claim 1. The combination of the Applicant's admitted prior art and Burdick does not specifically disclose the electromagnetic transponder, wherein a capacitive element of the parallel oscillating circuit is provided by a tray capacitance of an inductance of the parallel oscillating circuit.

DeMichele teaches the electromagnetic transponder, wherein a capacitive element of the parallel oscillating circuit is provided by a tray capacitance of an inductance of the parallel oscillating circuit (see column 9, lines 9-11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of DeMichele into the system of the Applicant's admitted prior art and Burdick in order to provide a novel electromagnetic



field transmission and detection system which can simultaneously transmit a high intensity magnetic field and detect a localized low intensity magnetic field (see DeMichele, column 20-25).

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being obvious over the Applicant's admitted prior art in view of DeMichele (US 5,084,699).

Regarding claim 14, the admitted prior art teaches a transponder comprising: an oscillating circuit adapted to be excited by an external electromagnetic field when the transponder enters the electromagnetic field (see Applicant's Background of The Invention pages 1-4), the oscillating circuit including an inductance (see Applicant's Background of The Invention page 2 lines 4-11). The admitted prior art does not specifically disclose a stray capacitance of the inductance acts as a capacitive element for the oscillating circuit.

DeMichele teaches a stray capacitance of the inductance acts as a capacitive element for the oscillating circuit (see column 9, lines 9-11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of DeMichele into the system of the Applicant's admitted prior art in order to provide a novel electromagnetic field transmission and detection system which can simultaneously transmit a high intensity magnetic field and detect a localized low intensity magnetic field (see DeMichele, column 20-25).

6. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being obvious over the Applicant's admitted prior art in view of DeMichele (US 5,084,699) and further in view of Burdick et al (US 6,424,820).

Regarding claim 15, the combination of the Applicant's admitted prior art and DeMichele teaches the transponder of claim 14. The combination of the Applicant's admitted prior art and DeMichele does not specifically disclose the components of the oscillating circuit are sized such that a coupling coefficient between the transponder and a read/write terminal that generates the electromagnetic field decreases rapidly decreases when a distance separating the transponder from the read/write terminal becomes greater than a predetermined value.

Burdick teaches the components of the oscillating circuit are sized (see column 39, line 14 to column 40, line 44) such that a coupling coefficient between the transponder and a read/write terminal that generates the electromagnetic field decreases rapidly decreases when a distance separating the transponder from the read/write terminal becomes greater than a predetermined value (see Burdick, column 6 lines 12-21, in Burdick, "1-3 meters" reads on Applicant's predetermined value).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Burdick into the system of the Applicant's admitted prior art and DeMichele so that user can be accommodated in a small physical area without interference (see Burdick, column 6 lines 14-15).

Regarding claim 16, the combination of DeMichele, Burdick and the Applicant's admitted prior art teaches predetermined value corresponds to 1-3 meters (see Burdick,

column 6 lines 15-21). The combination of DeMichele, Burdick and the Applicant's admitted prior art does not specifically disclose the predetermined value corresponds to approximately 1 centimeter. However, such distance range would have been obvious since the particular distance range could have been determined by the inventors' needs e.g., use a distance range which can minimize the interference with other users.

### ***Allowable Subject Matter***

7. Claims 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 5 and 6, the combination of Burdick and the Applicant's admitted prior art teaches claim 1. The combination of Burdick and the Applicant's admitted prior art fails to teach the claimed limitations of claims 5 and 6.

### ***Response to Arguments***

8. Applicant's arguments filed 01/02/2004 have been fully considered but they are not persuasive.

On pages 7 and 8 of Applicant's remarks, Applicant argues that the AAPA disclose the operating distance smaller than 1 cm and Burdick teaches the operating distance 1-3 meters and there is no motivation to modify the teaching of AAPA with the teaching of Burdick.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Burdick teaches "i.e., 1-3 meters" (see column 6, lines 17), the term "i.e." means "example", or the teaching of Burdick can be any predefined distance, and those skilled in the art thus would appreciate that the teaching of Burdick could be modified such that operating distance smaller than 1 cm without changing the scope and spirit of Burdick's invention, and motivation to do so found in the references themselves so that user can be accommodated in a small physical area without interference (see Burdick, column 6, lines 14-15).

On pages 8-10 of Applicant's remarks, Applicant argues that Burdick does not disclose sizing components of the transmitter or receiver based on a predefined distance.

The Examiner, however, disagrees. Burdick, (column 39, line 34-39, see "The fundamental design goal of the transmitter is to generate the maximum possible magnetic flux change at the range of the receiver within constraints imposed by the desired size"). In this case, the "range" is 1-3 meters (see Burdick, column 6, lines 17) and it reads on Applicant's "a predefined distance". Therefore, Burdick indeed teaches

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Applicant's claimed invention. In addition, Applicant's attention is directed to the rejection of claims 1 and 9 above.

***Conclusion***


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (703) 605-5164. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi H. Ly

UOLy  
06/03/04

  
**CHARLES APPIAH**  
**PRIMARY EXAMINER**